

REMARKS

Claims 1-15 are rejected as being anticipated by Gilliland, et al..

Claims 1-3 and 7-13 are cancelled, thereby rendering their rejection moot.

In order to make a prima facie case of anticipation, the reference must teach all claim limitations. It is respectfully submitted that Gilliland, et al. fails to teach or disclose defining each pixel as background pixels or foreground pixels comprised of interior pixels and edge pixel and reassigning the digital value of one or more edge pixels or interior pixels independently.

The Examiner argues that Gilliland, et al. teaches identifying each pixel as background pixels or foreground pixels (the abstract, lines 1-4 and column 1, lines 53-65) and adding the digital values of foreground pixels together (column 5, lines 45-62) and estimating toner usage based on the sum of the added values (column 5, lines 45-62). For convenience, these passages are hereby provided as follows, with emphasis added.

abstract, lines 1-4 and column 1, lines 53-65:

“An improved system for more accurately **estimating consumption of toner** imaging material in a digital xerographic printer **in relation to a count** of the digital pixels generating the various images being printed,”

column 1, lines 53-65:

“More specifically, here **pixel counts are desirably "weighted"** more heavily (for more toner consumption) **for higher frequency pixel rates, which correspond to halftones (frequent changes between black and white bits or pixels)**, and/or greyscale or other dotted images. Both said images use more toner for their development than large solid image areas, due to image edge "fringe field development"; a known, but usually unquantified, phenomena of xerography. In large (all black) image areas, where **there is a low frequency of changes between black and white pixels**, there is little or no such toner consumption increase, because there are far less image edge fringe fields.”


column 5, lines 45-62:

“To express it another way, every CRU toner cartridge 20 comes pre-filled with a specified (known constant) initial amount of toner, which is known to the printer 10 in this system. That number may be stored as a weighted pixel count in ROM, EPROM, or other non-volatile memory, or the CRU 20 can be coded or wired to so read and indicate when it is plugged into the printer 10. As each page is printed, the **pixel frequency is monitored** for that page. **An estimation of the average image type [halftone, line (text), or solid] is determined for that page, preferably line by line. The number of pixels for that line (or page) is then assigned a weight per pixel for that image type.** This calculated toner amount is subtracted from the remaining balance of toner. This new toner amount balance value is saved. The next page of pixels is then calculated and subtracted from this value. This process continues until the warning level for remaining toner is attained.”

It is respectfully submitted that Gilliland, et al. teaches monitoring pixel frequency based on changes between black and white pixels, estimating average image type based on the frequency, and then assigning a weight per pixel based thereon. Gilliland, et al. fails to teach or disclose defining each pixel as background pixels or foreground pixels comprised of interior pixels and edge pixel and reassigning the digital value of one or more edge pixels or interior pixels independently.

Accordingly, it also fails to teach all of the limitations of any of the dependent claims. Therefore, the Examiner has failed to make a prima facie case of anticipation, and claims 4-6, 14 and 15 are allowable.

Respectfully submitted,


Attorney for Applicant(s)
Registration No. 33,766

Richard A. Romanchik/d-n
Rochester, NY 14650
Telephone: 585-726-7522
Facsimile: 585-477-4646

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.